

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1-31. (Canceled)

32. (Currently Amended) A storage system, comprising:

a virtualization device coupled to an information processing device and having a first controller and at least one virtual volume;

said first controller receiving a data input request, which has a first Logical Unit Number (LUN) and data and is sent from said information processing device to said at least one virtual volume, and changing said first LUN included in said data input request into a second LUN of at least one first logical volume in a first storage device based on a relationship between said at least one virtual volume and said ~~first logical volume~~ at least one first logical volume and relaying said changed data input request to said first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives;

said second controller receiving said changed data input request from said first controller of said virtualization device and storing said data of said changed data

input request in said first disk drives related to said ~~first logical volume~~ at least one first logical volume;

a second storage device having a third controller and a plurality of second disk drives; and

said third controller storing data in said second disk drives related to a second logical volume;

wherein said first controller receives a command, in which said first LUN and command information is sent from said information processing device to said ~~virtual volume~~ at least one virtual volume, and changes said first LUN included in said command into said second LUN based on said relationship and relays said changed command to said ~~first logical volume~~ at least one first logical volume,

wherein said second controller receives said changed command from said virtualization device, and

wherein said second controller and/or said third controller changes a pair status between said ~~first logical volume~~ at least one first logical volume and said second logical volume based on said changed command.

33. (Previously Presented) The storage system according to claim 32, wherein:

said virtualization device has information of at least one storage device coupled to said virtualization device.

34. (Previously Presented) The storage system according to claim 32,
wherein:

said virtualization device has information of at least one storage device
coupled to said virtualization device; and

said virtualization device transferring said changed data input request and
said changed command to said first storage device based on said information.

35-37. Canceled

38. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status from a first status
to a second status;

said first status is that said ~~first logical volume~~ at least one first logical volume
and said second logical volume do not form a pair in which one of said ~~first logical~~
~~volume~~ at least one first logical volume and said second logical volume is set as a
primary volume and another is set as a secondary volume; and

said second status is that said ~~first logical volume~~ at least one first logical
volume and said second logical volume form said pair.

39. (Currently Amended) The storage system according to claim 32,
wherein:

said change of said pair status is to form a pair of said ~~first logical volume~~
at least one first logical volume as being a primary volume and said second logical
volume as being a secondary volume storing data which are corresponding to data
stored in said primary volume.

40. (Currently Amended) The storage system according to claim 32, wherein:

said change of said pair status is to form a pair of said second logical volume
as being a primary volume and said ~~first logical volume~~ at least one first logical
volume as being a secondary volume storing data which are corresponding to data
stored in said primary volume.

41. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of
copying data stored in said ~~first logical volume~~ at least one first logical volume as a
primary volume to said second logical volume as a secondary volume so that data

stored in said ~~first logical volume~~ at least one first logical volume conform to data stored in said second logical volume.

42. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of copying data stored in said second logical volume as a primary volume to said ~~first logical volume~~ at least one first logical volume as a secondary volume so that data stored in said second logical volume conform to data stored in said ~~first logical volume~~ at least one first logical volume.

43. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of copying data needed to be stored in said ~~first logical volume~~ at least one first logical volume as a primary volume to said second logical volume as a secondary volume, if said second controller receives said changed data input request.

44. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of storing data in relation to said second logical volume as a primary volume in said ~~first logical volume~~ at least one first logical volume as a secondary volume, if said third controller receives another data input request.

45. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of storing data sent from said information processing device in said ~~first logical volume~~ at least one first logical volume as a primary volume and not to store data in relation to said ~~first logical volume~~ at least one first logical volume in said second logical volume as a secondary volume.

46. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of storing data sent from said information processing device in said second logical volume as a

primary volume and not to store data in relation to said second logical volume in said
| ~~first logical volume~~ at least one first logical volume as a secondary volume.

47. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of
| restoring data from said ~~first logical volume~~ at least one first logical volume as a
primary volume to said second logical volume as a secondary volume.

48. (Currently Amended) The storage system according to claim 32, wherein:

said changed command is used to change said pair status to a status of
| restoring data in relation to said ~~first logical volume~~ at least one first logical volume in
said second logical volume.

49. (Canceled)

50. (Previously Presented) The storage system according to claim 32,
wherein:

said first storage device has a third logical volume, said third logical volume
being used to control said first storage device by said information processing device

51-52. (Canceled)

53. (Currently Amended) The storage system according to claim 32, wherein:
said first controller receives another command, which has said first LUN and
command information and is sent from said information processing device to said
~~virtual volume~~ at least one virtual volume, and changes said first LUN included in said
another command into said second LUN based on said relationship and transfers
said changed another command to said first storage device ; and
said first controller receives said changed another command from said
virtualization device and replies said pair status to said virtualization device in
response to said changed another command.

54. (Currently Amended) A storage system, comprising:
a virtualization device coupled to an information processing device and having
a first controller and at least one virtual volume;
said first controller receiving a data input request sent from said information
processing device to said ~~virtual volume~~ at least one virtual volume and changing a
first Logical Unit Number (LUN) included in said data input request into a second
LUN of at least one first logical volume in a first storage device based on a

relationship between said ~~virtual volume~~ at least one virtual volume and said first ~~logical volume~~ at least one first logical volume and relaying a data input request including said second LUN to said ~~first logical volume~~ at least one first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives;

said second controller receiving said data input request including said second LUN from said first controller of said virtualization device and storing data of said data input request including said second LUN in said first disk drives related to said ~~first logical volume~~ at least one first logical volume;

a second storage device having a third controller and a plurality of second disk drives; and

said third controller storing data in said second disk drives related to a second logical volume,;

wherein said first controller receives a command sent from said information processing device to said ~~virtual volume~~ at least one virtual volume and changes said first LUN included in said command into said second LUN based on said relationship and relays a command including said second LUN to said ~~first logical volume~~ at least one first logical volume, said command including said second LUN is used to inquire a pair status between said ~~first logical volume~~ at least one first logical volume and said second logical volume,

wherein said second controller receives said command including said second LUN from said virtualization device and replies said pair status to said virtualization device in response to said command including said second LUN.

55-75. (Canceled)

76. (Previously Presented) The storage system according to claim 32, wherein:

said first controller has a map of said relationship in a memory and reads said map in said memory on receiving said data input request and said command.

77. (Previously Presented) The storage system according to claim 32, wherein:

said first and second LUN are based on Small Computer System Interface (SCSI) standards.

78. (Currently Amended) A storage system, comprising:
a virtualization device coupled to an information processing device and having a first controller and at least one virtual volume;
said first controller receiving a data input request, which has a first Logical Unit Number (LUN) and data and is sent from said information processing device to

said ~~virtual volume~~ at least one virtual volume, and changing said first LUN included in said data input request into a second LUN of at least one first logical volume in a first storage device based on a relationship between said ~~virtual volume~~ at least one virtual volume and said ~~first logical volume~~ at least one first logical volume and relaying said changed data input request to said ~~first logical volume~~ at least one first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives;

said second controller receiving said changed data input request from said first controller of said virtualization device and storing said data of said changed data input request in said first disk drives related to said ~~first logical volume~~ at least one first logical volume;

said second storage device coupled to said first storage device and having a third controller and a plurality of second disk drives; and

said third controller storing data in said second disk drives related to a second logical volume and a third logical volume,

wherein said first controller receives a command, which has said first LUN and command information and is sent from said information processing device to said ~~virtual volume~~ at least one virtual volume, and changes said first LUN included in said command into said second LUN based on said relationship and relays said changed command to said ~~first logical volume~~ at least one first logical volume;

wherein said second controller receives said changed command from said virtualization device and transfers said changed command to a second storage device, and

wherein said third controller receives said changed command from said first storage device and changes a pair status between said second logical volume and said third logical volume based on said changed command.

79. (Currently Amended) A storage system, comprising:

a virtualization device coupled to an information processing device and having a first controller and at least one virtual volume;

said first controller receiving a data input request sent from said information processing device to said ~~virtual volume~~ at least one virtual volume and changing a first Logical Unit Number (LUN) included in said data input request into a second LUN of at least one first logical volume in a first storage device based on a relationship between said ~~virtual volume~~ at least one virtual volume and said first ~~logical volume~~ at least one first logical volume and relaying a data input request including said second LUN to said ~~first logical volume~~ at least one first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives;

said second controller receiving said data input request including said second LUN from said first controller of said virtualization device and storing data of said data input request including said second LUN in said first disk drives related to said ~~first logical volume~~ at least one first logical volume;

a second storage device coupled to said first storage device and having a third controller and a plurality of second disk drives; and

said third controller storing data in said second disk drives related to a second logical volume and a third logical volume,

wherein said first controller receives a command sent from said information processing device to said ~~virtual volume~~ at least one virtual volume and changes said first LUN included in said command into said second LUN based on said relationship and relays a command including said second LUN to said ~~first logical volume~~ at least one first logical volume, said command including said second LUN is used to inquire a pair status between said second logical volume and said third logical volume,

wherein said second controller receives said command including said second LUN from said virtualization device and changes said second LUN included in said command into a third LUN and transfers a command including said third LUN to a second storage device, and

wherein said third controller receives said command including said third LUN from said first storage device and replies said pair status to said first storage device in response to said command including said third LUN.

80. (Currently Amended) A storage system, comprising:

a virtualization device coupled to an information processing device and having a first controller and at least one virtual volume;

said first controller receiving a data input request sent from said information processing device to said ~~virtual volume~~ at least one virtual volume and changing a first Logical Unit Number (LUN) included in said data input request into a second LUN of at least one first logical volume in a first storage device based on a relationship between said ~~virtual volume~~ at least one virtual volume and said first ~~logical volume~~ at least one first logical volume and relaying a data input request including said second LUN to said ~~first logical volume~~ at least one first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives related to said ~~first logical volume~~ at least one first logical volume;

said second controller receiving said data input request including said second LUN from said first controller of said virtualization device and storing data of said data input request including said second LUN in said first disk drives;

a second storage device having a third controller and a plurality of second disk drives related to a second logical volume; and

said third controller storing data in said second disk drives,

wherein said first controller receives a command sent from said information processing device and relaying said command to said first storage device,

wherein said second controller receives said command from said virtualization device, and

wherein said second controller and/or said third controller changes a pair status between said ~~first logical volume~~ at least one first logical volume and said second logical volume based on said command.

81. (Previously Presented) The storage system according to claim 80, wherein:

said first controller has a map of said relationship in a memory and reads said map in said memory on receiving said data input request.

82. (Previously Presented) The storage system according to claim 80, wherein:

said first and second LUN are based on Small Computer System Interface (SCSI) standards.

83. (Currently Amended) The storage system according to claim 80, wherein:

said command is used to change said pair status from a first status to a second status;

said first status is that said ~~first logical volume~~ at least one first logical volume and said second logical volume do not form a pair in which one of said ~~first logical volume~~ at least one first logical volume and said second logical volume is set as a primary volume and another is set as a secondary volume; and

said second status is that said ~~first logical volume~~ at least one first logical volume and said second logical volume form said pair.

84. (Currently Amended) The storage system according to claim 80, wherein:
said command is used to change said pair status to a status of copying data stored in said ~~first logical volume~~ at least one first logical volume as a primary volume to said second logical volume as a secondary volume so that data stored in said ~~first logical volume~~ at least one first logical volume conform to data stored in said second logical volume.

85. (Currently Amended) The storage system according to claim 80, wherein:
said command is used to change said pair status to a status of copying data needed to be stored in said ~~first logical volume~~ at least one first logical volume as a primary volume to said second logical volume as a secondary volume, if said second controller receives said changed data input request.

86. (Currently Amended) The storage system according to claim 80, wherein:
said command is used to change said pair status to a status of storing data sent from said information processing device in said ~~first logical volume~~ at least one first logical volume as a primary volume and not to store data in relation to said ~~first logical volume~~ at least one first logical volume in said second logical volume as a secondary volume.

87. (Currently Amended) The storage system according to claim 80, wherein:
said command is used to change said pair status to a status of restoring data from said ~~first logical volume~~ at least one first logical volume as a primary volume to said second logical volume as a secondary volume.

88. (Currently Amended) A storage system, comprising:
a virtualization device coupled to an information processing device and having a first controller and at least one virtual volume;
said first controller receiving a data input request, which has a first Logical Unit Number (LUN) and data and is sent from said information processing device to said ~~virtual volume~~ at least one virtual volume, and changing said first LUN included in said data input request into a second LUN of at least one first logical volume in a

first storage device based on a relationship between said ~~virtual volume~~ at least one virtual volume and said ~~first logical volume~~ at least one first logical volume and relaying said changed data input request to said ~~first logical volume~~ at least one first logical volume in said first storage device;

said first storage device coupled to said virtualization device and having a second controller and a plurality of first disk drives related to said ~~first logical volume~~ at least one first logical volume;

said second controller receiving said changed data input request from said first controller of said virtualization device and storing said data of said changed data input request in said first disk drives;

a second storage device having a third controller and a plurality of second disk drives related to a second logical volume; and

said third controller storing data in said second disk drives;

wherein said first controller receives a command sent from said information processing device and relaying said command to said first storage device, said command is used to inquire a pair status between said ~~first logical volume~~ at least one first logical volume and said second logical volume, and

wherein said second controller receives said command from said virtualization device and replies said pair status to said virtualization device in response to said command.